

# LEAKAGE FREE CERAMIC FILMS FOR POROUS SURFACES

## Abstract of Disclosure

A porous ceramic substrate structure (10) having an interior portion (12) formed with an outer surface (14) is porous to at least one selected gas (16). A first ceramic coating layer (18) is applied to the outer surface (14) of the ceramic substrate structure (10) in a suspension state. The first ceramic coating suspension (20) has a desired level of viscosity for application to the substrate and is formed with a ceramic electrolyte powder and at least one organic additive. A second ceramic coating layer (22) is applied to the outer surface (14) following application of the first coating (18). The second coating (22) is initially applied after the first coating (18) and in a suspension state. The ceramic layers (18 and 22) substantially prevent gas leakage through the outer surface (14).